What is TyrFil?

TyrFil™ flatproofing is a liquid polyurethane material pumped into OTR tires to completely replace the air. Once it cures, it forms a flexible, resilient elastomer core that absorbs shock, eliminates flats, and safely operates over nails, sharp rocks and other common jobsite hazards.

For more than 50 years, TyrFil has been the trusted flatproofing solution around the world —helping businesses keep equipment working, operators safer, and job sites productive.

Roll with the top performer

TyrFil is engineered to improve overall tire performance. In addition to elimating flats:

- Absorbs shock and reduces G-force impact on both operator and equipment
- Maintains consistent internal pressure and even load distribution
- Enhances traction and stability
- Prevents rim slippage
- Can be retreaded up to four times

Added value

More than just flatproofing

Avoid the Domino Effect

One flat tire can stall an entire operation — costing time, revenue, and productivity. TyrFil's flatproofing technology eliminates that risk and keeps your teams moving.

How the costs add up

One Flat on a Telehandler	
Cost Type	Estimate
New tire	$1,600
On-site service call	$500
8 hours of downtime	$2,000–$5,000
Rental replacement	$1,000
Admin + scheduling	$300
Total (1 incident)	$5,400 –$8,400

Optimal Tire Performance

By maintaining consistent internal support and pressure, TyrFil helps:

- Improve fuel efficiency
- Maintain load capacity
- Promote even tread wear
- Eliminate pressure maintenance and related labor costs
- Reduce shock transfer to equipment components

Ideal for Hard-to-Find Tires

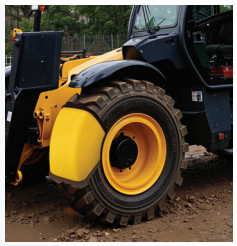
If you operate equipment with specialty or long-lead tire sizes, TyrFil helps extend their service life and avoids costly downtime.

Why Choose TyrFil?

Compared with solid tires, cores, or liners, TyrFil delivers clear advantages: proven performance, smoother ride quality, and superior cost-effectiveness.









Eliminates 100% of flats—no more unexpected downtime



Reduced downtime and costs — save on maintenance and tire replacement



Improved operator comfort and safety—less vibration and fatigue



Extended tire life and better equipment value—tires last longer and perform better over time

Protecting the world from flat tires and increasing productivity for more than 50 years.

Whether it's on a construction site, in a mine, or on a rental fleet, TyrFil keeps equipment rolling and your operations running.

TyrFil™ A CARLISLE BRAND

Safety that matters

Safety isn't just a feature of TyrFil—it's a priority:

- Prevents catastrophic blowouts
- Reduces harsh vibration and eliminates pneumatic bounce
- Improves vehicle stability
- Creates a more comfortable ride and reduces operator fatigue



TyrFil Processed Tires—41% less G-force transmission to cab/operator than solid aperture tires. Data was collected on a front end loader tested on a track replicating real jobsite conditions.

Prevent Solid Shock

Solid aperture tires eliminate flats, but they introduce another problem: Solid Shock—severe G-force vibration transmitted through the tire to the operator and machine. Over time, this vibration contributes to operator fatigue, discomfort, and injury risk, and premature equipment wear.

Impact on Operators:

- May cause headaches, back pain, joint strain, and fatigue
- Linked to Whole Body Vibration (WBV), a serious occupational concern

Impact on Equipment:

- Increases wear on critical components
- Shortens service life and raises maintenance costs

TyrFil significantly reduces Solid Shock—helping protect both operators and machines while delivering a smoother, more comfortable ride.

	G-force Transmission	Flatproof	Recyclable
Solid Aperture	Extremely High	✓ Yes	No
TyrFil	✓ Very Low	✓ Yes	✓ Yes

Carlisle TyrFil uses innovative processes that reduce reliance on oil, petrochemicals, and toxic materials. Tires filled with TyrFil can be retreaded multiple times, and the material can include up to 60% recycled content, minimizing waste and environmental impact.

The Right Choice for Your Fleet

Choosing the right tire solution sets the foundation for safety, productivity, and long-term cost savings. TyrFil's proven flatproofing technology not only eliminates flats but also enhances ride quality, protects assets, supports sustainability, and keeps your business running efficiently and profitably.

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We keep the world rolling.

